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R581

of, or attentional capture by, the stimuli employed.

How does it work and what is it for? Two explanations have been offered. Yarrow *et al.* hypothesized that it serves to create perceptual continuity across saccadic eye movements during which visual sensitivity is largely reduced, mainly due to saccadic suppression. Rose's and Summers' demonstration of chronostasis without eye movements, however, raises a question about this. The time perception literature suggests that the state of arousal produced by an abrupt stimulus change may be sufficient to transiently speed up the internal clock and therefore lead to an overestimation of duration.

Does it occur in modalities other than the visual-oculomotor system? As well as stopped clocks you may have been left hanging on the telephone: sometimes a dialling tone seems to have gone dead if you are distracted from the phone and return to listening. Whether the phenomenon occurs in the somatosensory domain remains to be seen — or felt.

What next? The phenomenon has aroused new interest and some of the questions to be ticked off the list are: which brain structures are involved in mediating chronostasis? What sensory modalities does it occur in? What is its relation to other perisaccadic phenomena, like suppression and compression?

Where can I find out more?

- Rose, D. and Summers, J. (1995). Duration illusions in a train of visual stimuli. *Perception* 24, 1177–1187.
- Ross, J., Morrone, M.C., Goldberg, M.E. and Burr, D.C. (2001). Changes in visual perception at the time of saccades. *Trends Neurosci.* 24, 113–121.
- Yarrow, K., Haggard, P., Heal, R., Brown, P. and Rothwell, J.C. (2001). Illusory perceptions of space and time preserve cross-saccadic perceptual continuity. *Nature* 414, 302–305.

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Lethal moves

Many aspects of ageing remain mysterious but a new study suggests that, at least in one species of insect, males demonstrate a clear behavioural harbinger of their demise.

Studies by Nikos Papadopoulos and colleagues at the University of Thessaloniki, Greece, and the University of California at Berkeley and Davis, have reported (*Proc. R. Soc. London B* (2002) 269, 1633–1637) that male Mediterranean fruitflies (*Ceratitis capitata*) show that the onset of a distinctive behaviour had a dramatic effect on future lifespan.

The researchers termed the behaviour 'supine', as a result of the upside-down position of the temporarily immobile flies. Supine males lie on their backs at the

bottom of their cage appearing dead. But these flies are very much alive and robust as becomes evident when they right themselves.

Over 97 per cent of the 203 male flies studied exhibited supine behaviour starting on average 16.1 days before death. Life expectancy for young flies less than 20 days old showing this behaviour had a future life expectancy of less than 20 days whereas normal flies could expect a further 50–60 days.

For older flies with a life expectancy of around 35 days, the onset of supine behaviour brought that figure down to 15 days. With growing interest in the biology and genetics of ageing, this small fruitfly may hold some intriguing clues.



Ageing clues: Novel behaviour may indicate the timing of death in the male Mediterranean fruitfly. (Picture: Science Photo Library.)